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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/815,143

03/31/2004

Angel Stoyanov

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EXAMINER

CORDRAY, DENNIS R

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/815,143	STOYANOV ET AL.	
	Examiner	Art Unit	
	Dennis Cordray	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 4 and 10-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "Bleached polyacrylic acid crosslinked cellulosic fibers, comprising polyacrylic acid crosslinked fibers treated with a bleaching agent..." Claim 10 recites "...bleached polyacrylic acid crosslinked fibers, wherein the bleached polyacrylic acid crosslinked cellulosic fibers comprise polyacrylic acid crosslinked fibers treated with a bleaching agent..." It is not clear whether the fibers have been treated with a bleaching agent prior, during or after crosslinking. Claims 3, 4 and 11-13 depend from Claims 1 or 10, thus inherit the indefiniteness of the parent claims.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 1731

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5 and 10-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Herron et al (5549791) as evidenced by Dean et al (4822453).

Herron et al discloses polyacrylic acid crosslinked cellulosic fibers (col 5, lines 50-51). Herron et al teaches that the pulp fibers can be partially or completely bleached and that bleached pulp is desirable for its superior brightness and consumer appeal (col 5, lines 32-36). A method for producing the fibers is disclosed (col 10 line 27 through col 13, line 16). Herron et al also teaches the fibers can be used in absorbent products such as tissues paper towels, diapers, sanitary napkins, catamenials and other similar products (col 5, lines 37-39 and col 15, lines 10-13).

Herron et al disclose that crosslinked fibers can be bleached (col 13, lines 14-16). With regard to the bleaching, Herron states that post-crosslink bleaching affects the WRV (water retention value) of the fibers without providing details as to what the effect is on the WRV. These effects are discussed by Dean et al (4822453), who make a similar statement (col 9, lines 64-66) and disclose that a combination of pre-crosslink and post-crosslink bleaching results in higher fluid retention values as well as other processing advantages (col 17, line 32 to col 18, line 2, especially col 17, lines 51-53). Dean et al also discloses that the necessary amount of pre-crosslink and post-crosslink bleaching would be evident to one of ordinary skill in the art (col 17, lines 46-50). Dean et al and Herron et al are commonly assigned, share at least one inventor and relate to

similar subject matter, thus it would be obvious to expect post-crosslink bleaching to be advantageous.

Although Herron et al are silent as to the whiteness of the fibers, the use of bleaching to elevate whiteness is well known (see for instance Haylock, "Paper, Its making, merchanting and usage" 3rd ed, The National Association of Paper Merchants, London, 1974, p 46, 1st paragraph under Bleaching; or Hawley's Condensed Chemical Dictionary, 14th ed (2002), which defines Bleach - to whiten a textile or paper by chemical action). Bleaching, either prior to, during or after crosslinking would either inherently or obviously result in fibers that are whiter and therefore have a greater Whiteness Index than unbleached fibers.

2. Claims 3, 4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herron et al in view of Cook et al (5562740) .

Herron et al does not teach bleaching with hydrogen peroxide or with sodium chloride.

Cook et al discloses individualized polycarboxylic acid crosslinked fibers with a brightness of 86 after bleaching in an aqueous solution of sodium hydroxide and hydrogen peroxide (col 3, lines 42-45). Cook further discloses an amount of sodium hydroxide to be applied of about 0.07 weight % to about 1.8 weight % of the dry fibers and an amount of hydrogen peroxide to be applied of about 0.02 weight % to about 1.5 weight % of the dry fibers (col 4, lines 42-45 and 49-51). The disclosed ranges of Cook

et al for sodium hydroxide and hydrogen peroxide concentrations substantially overlap the claimed ranges.

The art of Herron et al, Cook et al and the claimed invention are analogous because they are from the same art of treating cellulosic fibers. It would have been obvious at the time the invention was made to a person with ordinary skill in the art to use the claimed concentration ranges of sodium hydroxide and hydrogen peroxide as bleaching agents in the process of Herron et al in view of Cook et al to make the crosslinked fibers appealing to customers.

3. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herron et al (5549791) in view of Cook et al and further in view of Wang et al (2002/0157189).

Herron et al and Cook et al do not teach bleached fibers having a CIE Whiteness Index greater than 75.0.

Wang et al gives examples of woven fabric bleached with sodium hydroxide and hydrogen peroxide that have a CIE Whiteness of greater than 75.0 (P 8 and 9, Tables I and II). Wang et al also teaches that the bleaching can be used with cellulosic materials such as cotton, linen, silk, hemp, flax and jute (p 8, par 96).

The art of Herron et al, Cook et al, Wang et al and the instant invention are analogous art as they deal with treatment of cellulosic fibers. It would have been obvious at the time the invention was made to a person with ordinary skill in the art to obtain the claimed brightness in the process of Herron et al in view of Cook et al and further in view of Wang et al to make the crosslinked fibers appealing to customers.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-4 and 10-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 9 and 10 of copending Application No. 10/815206 in view of Frate et al (6211296).

- Claims 1 and 2 of the instant application are obvious in view of Claim 1 of the copending application and further in view of Frate et al. Claim 1 of the copending application recites bleached crosslinked cellulosic fibers having a Whiteness Index greater than similarly crosslinked unbleached fibers. Claim 1 of the copending application further recites the crosslinking agent in the presence of a C₄-C₁₂ polyol. Frate et al teaches polyacrylic acid with a polyol as one of many possible polymer crosslinking agents (col 10, lines 15-21). It would have been

obvious to one of ordinary skill in the art to use polyacrylic acid with a polyol as a known crosslinking agent to crosslink the fibers of Claim 1 of the instant application.

- Claims 3 and 4 of the instant application read the same as Claims 9 and 10 of the copending application.
- Claims 10, 11 and 12 of the instant application read substantially the same as Claims 14, 16 and 15 of the copending application.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

Entry of the response filed 4/3/2006 including the Declaration of Kathy A. Welch filed March 3, 2006 is affirmed.

In light of the Declaration, the rejection of claims 1, 5 and 10-12 under 35 U.S.C. 103(a) over Herron et al in view of Neogi et al is withdrawn. However, upon further consideration, a new ground(s) of rejection is made above in view of a different interpretation of the claims with regard to a previously applied reference.

With respect to the Herron reference, Applicants argue that the reference teaches away from bleaching polyacrylic acid crosslinked fibers by teaching that post-crosslink bleaching affects the water retention value (WRV) of the fibers. Applicants further argue that the effect on WRV must be adverse or the bleaching would have been described in detail by Herron et al as advantageous. The arguments are speculative and cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602,

145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) ("An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness.").

Herron et al discloses post-crosslink bleaching as an option and only states that post-crosslink bleaching affects the WRV of the fibers. The effects are discussed by Dean et al (4822453), who make a similar statement (col 9, lines 64-66) and disclose that a combination of pre-crosslink and post-crosslink bleaching results in higher fluid retention values as well as other processing advantages (col 17, line 32 to col 18, line 2, especially col 17, lines 51-53). Dean et al also discloses that the necessary amount of pre-crosslink and post-crosslink bleaching would be evident to one of ordinary skill in the art (col 17, lines 46-50). Dean et al and Herron et al are commonly assigned, share at least one inventor and relate to similar subject matter, thus it would be obvious to expect post-crosslink bleaching to be advantageous.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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